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EXAMINER

DAVIS, TEMICA M

ART UNIT	PAPER NUMBER
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2681

DATE MAILED: 03/30/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/746,188

Applicant(s)

COSKUN ET AL.

Examiner

Temica M. Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-14,17,18 and 20-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-14,17,18 and 20-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, filed January 6, 2004, with respect to the rejection(s) of claim(s) 24 and 25 under 35 U.S.C. 102(b) as being anticipated by Comroe have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Purnadi et al (Purnadi), U.S. Patent No. 6,708,031 as set forth below.

2. Applicant's arguments filed January 6, 2004 with respect to claims 1-23 and 26-29 (Claims 4, 15, 16 and 19 now cancelled) have been fully considered but they are not persuasive.

Applicant argues that Comroe fails to disclose the claims as amended. Specifically, it is argued that Comroe fails to disclose a dormant mode option for hard-handoffs from a first radio sector to a second radio sector, but instead discloses that a dormant mode is only provided for failure during initial access to the communication system.

However, the claim language for claims 1-23 and 26-29 does not require a dormant mode for hard-handoffs. As presently claimed, initially it is determined whether or not resources are available in the sectors, and if not, the terminal is placed in a dormant mode. Then it is determined whether or not a hard-handoff is needed from one sector to another. However, it is not stated that the hard-

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handoff takes place during the dormant mode (i.e., time could have elapsed, and the terminal could now be in communication with one of the sectors when the handoff is desired.

Based on these remarks, the claims as presently amended still read on Comroe. The rejection is set forth below.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-3,7, 9-11, 14, 17, 18, 21-23 and 26-29 are rejected under 35 U.S.C. 102(b) as being anticipated by Comroe et al (Comroe), U.S. Patent No. 5,355,367.

Regarding claim 1, Comroe discloses a computing apparatus arranged to operate within a wireless network including at least one radio sector in which mobile terminals can communicate, the computing apparatus comprising: network resource allocation logic that operates to request allocation of at least one network resource associated with a second radio sector for at least one mobile terminal; to determine if the allocation of the at least one network resource associated with the radio sector is successful; and, if the allocation fails, to request the at least one mobile terminal be placed within a dormant mode, in

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which communication between the at least one mobile terminal and the first radio sector is suspended (col. 6, lines 25-51); and hard handoff determination logic that operates to determine if a hard handoff from the first radio sector to the second radio sector is desirable for the at least one mobile terminal and, if the hard handoff is necessary, to trigger the operation of the network resource allocation logic for the at least one mobile terminal within the second radio sector (col. 7, lines 16-48; figure 4).

Regarding claim 2, Comroe discloses a computing apparatus according to claim 1, wherein the network resource allocation logic further operates to continue to request allocation of the at least one network resource associated with the second radio sector for the at least one mobile terminal after the allocation has previously failed; to determine if the allocation of the at least one network resource associated with the second radio sector is successful after the allocation has previously failed; and, if the allocation is successful, to request the at least one mobile terminal be placed within a connected mode in which communication between the at least one mobile terminal and the second radio sector is established (col. 6, lines 25-51 and col. 7, lines 12-49).

Regarding claim 3, Comroe discloses a computing apparatus according to claim 2, wherein, if a plurality of mobile terminals have been placed within the dormant mode, the network resource allocation logic further operates to select a predetermined queue order for requesting the dormant mobile terminals to be placed within the connected mode (col. 6, lines 41-43).

Regarding claim 7, Comroe discloses a computing apparatus according to

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claim 4, wherein the network resource allocation logic further operates to request allocation of the at least one network resource associated with the second radio sector for the at least one mobile terminal if the allocation has previously failed; to determine if the allocation of the at least one network resource associated with the second radio sector is successful after a previous failure; and, if the allocation is successful, to request the at least one mobile terminal be placed within a connected mode, in which communication between the at least one mobile terminal and the second radio sector is established (col. 6, lines 25-51 and col. 7, lines 12-49).

Regarding claim 9, Comroe discloses a computing apparatus according to claim 1, wherein the at least one network resource associated with the radio sector inherently comprises a Data Traffic Channel (DTC) between the at least one mobile terminal and a Radio Access Port (RAP) (figures 4 and 5).

Regarding claim 10, Comroe discloses a computing apparatus according to claim 1, wherein the at least one network resource associated with the second radio sector comprises inherently a Dedicated Signalling Channel (DSC) between the at least one mobile terminal and a Radio Access Port (RAP) (figure 4).

Regarding claim 11, Comroe discloses a computing apparatus according to claim 1, wherein the at least one network resource associated with the second radio sector inherently comprises a Segmentation and Distribution Unit (SDU) with in a Radio Access Port (RAP) (figure 4).

Regarding claim 14, Comroe discloses a computing apparatus according

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to claim 1, wherein the network resource allocation logic determining if he allocation of he at least one network associated with the second radio sector is successful comprises monitoring for an allocation failure message, the reception of the allocation failure message indicating that the allocation of at least one network resource associated with the second radio sector failed (col. 6, lines 25-43).

Regarding claim 17, Comroe discloses a computing apparatus arranged to control allocation of network resources for a mobile terminal from a first radio sector to a second radio sector during a hard handoff of a communication link with the mobile terminal from the first radio sector to the second radio sector, the computing apparatus comprising: means for attempting allocation of at least one network resource associated with the second radio sector for the mobile terminal; means for determining if the allocation of the at least one network resource associated with the second radio sector is successful; means for requesting the mobile terminal be placed within a dormant mode if the allocation of the at least one network resource associated with the second radio sector fails in which communication between the mobile terminal and the first radio sector is suspended (col. 5, line 62-col. 6, line 52), and means for determining if a hard handoff from the first radio sector to the second radio sector is desirable for the mobile terminal; wherein the means for attempting allocation of at least one network resource associated with the second radio sector for the mobile terminal operate for the mobile terminal within the second radio sector if the hard handoff is desirable (col. 7, lines 15-49).

Regarding claim 18, Comroe discloses a computing apparatus according to claim 17, wherein the means for attempting allocation of at least one network resource associated with the second radio sector for the mobile terminal and the means for determining if the allocation is successful continue to operate after the allocation has previously failed; and wherein the computing apparatus further comprises means for requesting the mobile terminal be placed within a connected mode if the allocation is successful after a previous failure (col. 5, line 52-col. 6, line 52).

Regarding claim 21, Comroe discloses a method for allocating network resources, during a hard-handoff from a first radio sector to a second radio sector for a mobile terminal comprising: attempting to allocate at least one network resource associated with the radio sector to the mobile terminal; and if the allocation of the at least one network resource fails, requesting the mobile terminal be placed within a dormant mode, in which communication between the mobile terminal and the first radio sector is suspended (col. 5, line 52-col. 6, line 52).

Regarding claim 22, Comroe discloses a method according to claim 21 further comprising: attempting to allocate the at least one network resource associated with the second radio sector to the mobile terminal after the allocation has previously failed; and if the allocation of the at least one network resource is successful after previously failing, requesting the mobile terminal be placed within a connected mode (col. 6, lines 22-31 and col. 7, lines 12-49).

Regarding claim 23, Comroe discloses a method for performing a hard

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handoff of a mobile terminal from a first radio sector to a second radio sector comprising: determining if network resources of the second radio sector are sufficient for the mobile terminal; and if the network resources of the second radio sector are not sufficient for the mobile terminal, instructing the mobile terminal to be placed within a dormant mode until sufficient network resources for the mobile terminal are available in which communication between the mobile terminal and the first radio sector is suspended (col. 5, line 52-col. 6, line 52).

Regarding claim 26, Comroe discloses a computing apparatus for handling hard handoffs within a wireless network in which mobile terminals can be in communication with a first radio sector, the computing apparatus comprising: network resource allocation logic that operates to determine the availability of at least one network resource associated with the second radio sector and, if the at least one network resource associated with the second radio sector is determined to have insufficient bandwidth for current traffic, to request at least one of the mobile terminals be placed within a dormant mode, in which communication between the at least one of the mobile terminals and the first radio sector is suspended (col. 5, line 62-col. 6, line 52); and hard handoff determination logic that operates to determine if a hard handoff from the first radio sector to the second radio sector is desirable for the at least one mobile terminal and, if the hard handoff is necessary, to trigger the operation of the network resource allocation logic for the at least one mobile terminal within the second radio sector (col. 7, lines 16-48; figure 4).

Regarding claim 27, Comroe discloses a computing apparatus according

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to claim 26, wherein the network resource allocation logic selects the at least one of the mobile terminals to be placed within a dormant mode based upon a priority system (col. 6, lines 41-44).

Regarding claim 28, Comroe discloses a computing apparatus according to claim 26, wherein the network resource allocation logic further operates to determine the availability of the at least one network resource associated with the second radio sector and, if the at least one network resource associated with the second radio sector is determined to have sufficient bandwidth for current traffic and the mobile terminal placed within the dormant mode, to request the mobile terminal be placed within a connected mode, in which communication between the at least one mobile terminal and the second radio sector is established (col. 5, line 62-col. 6, line 52).

Regarding claim 29, Comroe discloses a computing apparatus according to claim 28, wherein, if a plurality of mobile terminals have been placed within the dormant mode, the network resource allocation logic further operates to select a predetermined queue order for requesting the dormant mobile terminals to be placed within the connected mode with the second radio sector (col. 6, lines 41-44).

5. Claims 24 and 25 are rejected under 35 U.S.C. 102(e) as being anticipated by Purnadi et al (Purnadi), U.S. Patent No. 6,708,031.

Regarding claim 24, Purnadi discloses a wireless communication network comprising: first and second Radio Access Ports (RAPs) that operate to

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communicate with mobile terminals within at least first and second radio sectors respectively; and a computing apparatus that operates: (a) to detect if a mobile terminal communicating with the first RAP requires a hard handoff from the first radio sector to the second radio sector; (b) to attempt to allocate at least one resource associated with the second RAP to the mobile terminal if a hard handoff is required; and 8 to request the mobile terminal be placed into a dormant mode if the attempt to allocate the at least one resource fails (col. 4, lines 52-61, col. 5, lines 1-10 and col. 9, col. 62-col. 10, lines 24).

Regarding claim 25, Comroe discloses a network according to claim 24, wherein the computing apparatus inherently comprises a Handoff Manager (HM) and a Radio Link Access (RLA), the HM performing operation (a) and the RLA performing operations (b) and (c) with instructions from the HM (figure 1).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Comroe in view of Baiyor et al (Baiyor), U.S. Patent No. 6,282,429.

Regarding claim 5, Comroe discloses a computing apparatus according to claim 4, wherein the hard handoff determination logic operates to determine if a

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hard handoff is necessary for the mobile terminal (col. 6, lines 52-61; figures 6A and 6B).

Comroe, however, fails to disclose wherein the determination of a need for handoff is based on receiving and processing Pilot Strength Measurement (PSM) messages from the at least one mobile terminal.

In a similar field endeavor, Baiyor discloses this limitation (col. 9, lines 45-65). At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Comroe with Baiyor since such a technique is widely used in cellular systems.

8. Claims 6, 8, 12, 13 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Comroe.

Regarding claims 6, 8 and 20, Comroe discloses the apparatus of claims 4 and 19 as described above. Comroe, however, fails to disclose deallocating system resources.

The examiner contends, however, that at the time of invention, such a technique would have been obvious to a person of ordinary skill in the art for the purpose of reserving communication resources for users who may need to communicate.

Regarding claims 12 and 13, Comroe discloses a computing apparatus according to claims 12 as described above. Comroe, however, fails to disclose wherein the network resource allocation logic requesting the mobile terminal be placed within a dormant mode comprises requesting the mobile terminal to

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suspend communications on any of its previously established communication channels.

The examiner contends, however, that at the time of invention, such a technique would have been obvious to a person of ordinary skill in the art for the purpose of reserving communication resources for users who may need to communicate.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached Monday through Friday (alternate Fridays) from 9:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika Gary can be reached on (703) 308-0123. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

Temica M. Davis
Examiner
Art Unit 2681

TMD
March 20, 2004


TEMICA M. DAVIS
PATENT EXAMINER